

ABSTRACT OF THE DISCLOSURE

A mechanism for quality-of-service-controllable real-time scheduling. The mechanism can be implemented by an apparatus including a regulator, an on-line scheduler, and an evaluator. The regulator is used for adjusting the number of tasks inputted into the on-line scheduler. The on-line scheduler is used to select a real-time scheduling method for configuring time intervals for inputted tasks to be executed. The evaluator is used to evaluate a scheduling result of the on-line scheduler for feeding a first set of parameters into the regulator for a coarse adjustment, and feeding a second set of parameters into the on-line scheduler for a fine adjustment. Besides, for the fulfillment of real-time scheduling, three scheduling methods, namely, MOS, MOP, and MOF methods, are provided. In the MOS method, the mandatory portions are executed as soon as possible and the optional portions may be substitutable. In the MOP method, the mandatory portions are executed as soon as possible, and the substitutable optional portions are to be postponed. In the MOF method, the mandatory portions are executed as soon as possible, and the optional portions will be executed fairly.

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